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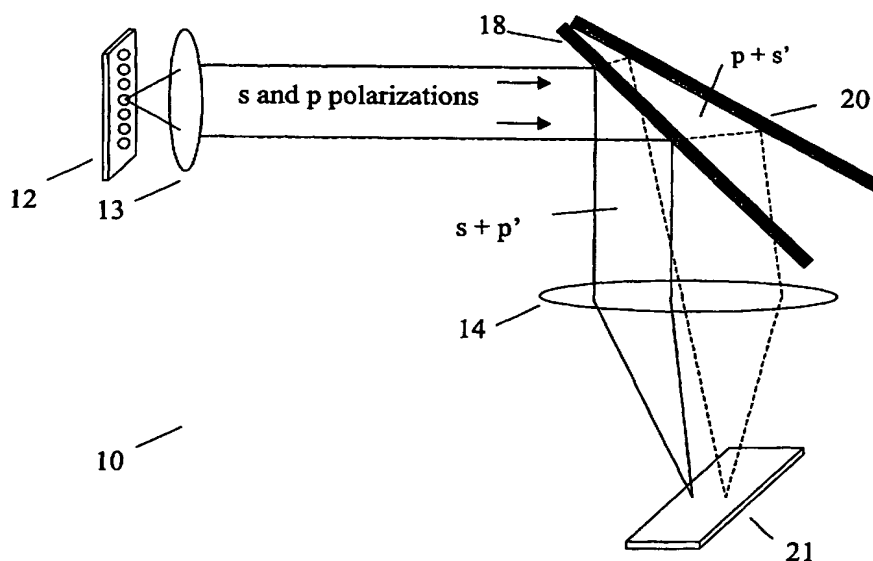
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(54) Title: POLARIZATION DETECTION



(57) Abstract: Disclosed is an optical device (10) for receiving light having a wavelength between 400 nm and 680 nm. The device has a polarizing beam splitter (PBS) (18) that comprises a substrate having a first and second surface, at least one of which being coated with a substantially parallel array of elongated conducting elements, wherein the PBS reflects light of a first polarity and transmits light of the opposite polarity; and a reflector (20) positioned to reflect the opposite polarity light back through the PBS (18) to the front surface, wherein the reflector (20) does not substantially alter the polarity of light at any position. The device (10) can be used to detect fluorescence polarization of a sample (12).

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International application No.

PCT/US04/08906

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01J 4/00; C12Q 1/68

US CL : 356/364-369, 322, 327; 435/6

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 356/364-369, 322, 327; 435/6

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST and WEST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|---|
| X | US 6,252,668 B1 (HILL) 26 June 2001 (26.06.2001), Figures 2a, 6a; column 18, lines 6-40. | 1-7, 10-15, 18-28, 30, 31, 33, 34, 37, 38, 43, 45, 47, 48 |
| A | US 4,908,508 A (DUBBELDAM) 13 March 1990 (13.03.1990), Figures 1-2. | 1-49 |
| A | US 4,585,348 A (CHASTANG et al) 29 April 1986 (29.04.86), Figure 1. | 1-49 |

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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